

CLAIMS:

1. A bicycle pedal for releasibly engaging a cleat affixed to the bottom of a shoe, said pedal comprising:

a spindle with a thread on one end for attachment to a bicycle crank arm;

a housing that rotates about said spindle; and

a spring loaded latch mechanism that pivots concentrically with the axis of said spindle, wherein said latch mechanism comprises:

a plurality of substantially U-shaped members; and

at least one spring that holds said U-shaped members apart from each other at substantially equal angles of spacing;

wherein said latch mechanism allows engagement with said cleat between adjacent pairs of said U-shaped members.

2. ^{Ins} ~~Claim~~ ¹ wherein said spring has a coil axis that is substantially coincident with said axis of said spindle.

3. ^{Ins} ~~Claim~~ ² wherein two of said U-shaped members are affixed to said housing and other said U-shaped members pivot on said housing.

4. ^{Ins} ~~Claim~~ ² wherein all of said U-shaped members pivot on said housing.

5. ^{Ins} ~~Claim~~ ³ wherein said housing rotates about said spindle on at least one bearing.

6. ^{Ins} ~~Claim~~ ⁵ wherein said pedal is substantially symmetric about the axis of said pedal along each of two perpendicular planes.

7. ^{Ins} ~~Claim~~ ⁶ wherein said U-shaped members are formed in part by bent wire.

8. A bicycle pedal for releasibly engaging a cleat affixed to the bottom of a shoe, said pedal comprising:

a spindle with a thread on one end for attachment to a bicycle crank arm;

a housing that rotates about said spindle; and

a spring loaded latch mechanism that pivots concentrically with the axis of said spindle, wherein said latch mechanism comprises:

a plurality of hooked members; and

at least one spring that holds said hooked members apart from each other at substantially equal angles of spacing;

wherein said latch mechanism allows engagement with said cleat between adjacent pairs of said hooked members.

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9. ~~Claim~~ 8 wherein said spring has a coil axis that is substantially coincident with said axis of said spindle.
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10. ~~Claim~~ 9 wherein two of said hooked members are affixed to said housing and the other of said hooked members pivot on said housing.
A A 8

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11. ~~Claim~~ 9 wherein all of said hooked members pivot on said housing.
A A 9

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12. ~~Claim~~ 10 wherein said housing rotates about said spindle on at least one bearing.
A A 10

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13. ~~Claim~~ 12 wherein said pedal is substantially symmetric about the axis of said pedal along each of two perpendicular planes.
A A 11

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14. ~~Claim~~ 13 wherein said hooked members are formed in part by bent wire.
A A 12

15. A bicycle pedal for releasibly engaging a cleat affixed to the bottom of a shoe, said pedal comprising:

a spindle with a thread on one end for attachment to a bicycle crank arm;

a housing that rotates about said spindle; and

a spring loaded latch mechanism that pivots concentrically with the axis of said spindle, wherein said latch mechanism comprises:

a plurality of substantially rectangular shaped members having four sides, at least one said rectangular shaped member having a hub-like device built into two opposing ones of said sides; and

at least one spring that holds said rectangular shaped members apart from each other at substantially equal angles of spacing;

wherein said latch mechanism allows engagement with said cleat between adjacent pairs of said rectangular shaped members.

16. ~~Claim 15~~ wherein said spring has a coil axis that is substantially coincident with said axis of said spindle. ^{AA13}

17. ~~Claim 16~~ wherein one of said rectangular shaped members is affixed to said housing and the other said rectangular shaped members pivots on said housing. ^{AA14}

18. ~~Claim 16~~ wherein all of said rectangular shaped members pivot on said housing. ^{AA15}

19. ~~Claim 17~~ wherein said housing rotates about said spindle on at least one bearing. ^{AA16}

20. ~~Claim 19~~ wherein said pedal is, except for said spring or springs, substantially symmetric about the axis of said pedal along each of two perpendicular planes. ^{AA17}